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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/614,821	07/09/2003	Hiroshi Akamizu	239964US0	8103

22850 7590 04/19/2005

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EXAMINER

YEE, DEBORAH

ART UNIT	PAPER NUMBER
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1742

DATE MAILED: 04/19/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/614,821	Applicant(s) HIROSHI AKAMIUZ ET AL	
	Examiner Deborah Yee	Art Unit 1742	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-4 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>3-24-05, 11-30-04</u> . | 6) <input checked="" type="checkbox"/> Other: <u>IDS 5-25-04, 7-9-03</u> . |

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DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 3 and 4 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.
3. Claims are indefinite because the preamble recites "...hot rolling, optionally cold rolling and continuous annealing comprising the steps of.." yet the actively recited steps recite the additional step of solution treatment which is not recited in the preamble, and the optional cold rolling and continuous annealing step recited in preamble is not actively recited in the process. Moreover, it is redundant to recite steps in preamble, and it is recommended to omit such language and amend preamble to recite
---A process for producing the high-strength steel sheet of claim 1 comprising the steps of:---.
4. Moreover, the last step of claim 3 and 4 is indefinite because it is unclear and awkwardly recited. It is recommended to use language such as ---hot rolling the slab into a steel sheet; and subjecting the steel sheet to austempering by cooling steel sheet after hot rolling, to the bainite - transformation temperature range and holding within said temperature range for 50 to 200 seconds.

5. Also it is recommended to submit two additional process claims reciting the alternative method of hot rolling, cold rolling and continuous annealing and austempering.

Specification

6. The disclosure is objected to because of the following informalities: Grammatical and spelling error. See page 28 and 30 ,“baintenite” should be –bainite--.

Appropriate correction is required.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 1 and 2 are rejected under 35 U.S.C. 103(a) as being unpatentable over the Japanese patents 411323490, 406065677, and 404337026.

9. JP'490 table on page 5, JP'677 table on page 4, or JP'026 table on page 136, each teach specific steel sheet examples which meet the claimed composition.

Moreover, their English abstracts disclose steels to have a mother structure of ferrite with a second phase structure of residual austenite and martensite in a range that

overlaps applicants' range of 25% or less. Also similar to the present invention, prior art teaches a steel sheet having high strength and high ductility.

10. Even though the additional requirements (1) to (4) recited by claims 1 and 2 are not disclosed by prior art, such would be expected since composition is met and in absence of proof to the contrary.

Allowable Subject Matter

11. Claims 3 and 4 would be allowable if rewritten or amended to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action.

12. The following is an examiner's statement of reasons for allowance: The art of record does not teach or fairly suggest the process for producing the high strength steel sheet, as claimed, by solution heat treatment at 1,270C or high for 5 hours or more; hot rolling; and austempering by cooling after hot rolling to the bainite- transformation temperature range and maintaining steel within said temperature range for 50 to 200 seconds. Criticality of solution heat treating and austempering holding time of 50 to 200 seconds is demonstrated in figure 2 and comparative test data in Table 2, examples 1 to 6 and 16 to 21. Present invention process recites steps that efficiently produce high strength steel having optimum balance of strength, local elongation and low yield ratio that are not taught by prior art.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably

accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Deborah Yee whose telephone number is 571-272-1253. The examiner can normally be reached on Monday-Friday from 6:00 to 2:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Roy King can be reached on 571-272-1244. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Deborah Yee
Primary Examiner
Art Unit 1742

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